



## **DECISION MEMO**

# MOONLIGHT FIRE FUELS REDUCTION IN SPOTTED OWL AND GOSHAWK HABITAT PROJECT

U.S. FOREST SERVICE
PLUMAS NATIONAL FOREST
MT. HOUGH RANGER DISTRICT
PLUMAS COUNTY, CA

#### **PROJECT LOCATION**

Project area is located adjacent to the community of Taylorsville and the surrounding Indian Valley area (see Figure 1). The project area is within Township 27N, Range 10E, Sections 33 and 35; and Township 26N, R11E, Sections 29 and 30: and Township 26N, R10E, Section 34; and Township 25N, R10E, Sections 2, 3, 10,11 and 15; Mount Diablo Base Meridian (MDBM). Approximately 52% of the project area is within the Wildland Urban Interface (WUI), or forest adjacent to residential areas. Treating these areas are consistent with USFS mission goals and fuels department priorities.

#### BACKGROUND

The Moonlight Fire burned 64,997 acres in 2007 and converted 28,887 acres of old forest habitat into chaparral, representing a loss of 91% of the available late-successional habitat within the Moonlight Fire perimeter. As a result, 17 California spotted owl and 6 Northern goshawk protected activity centers (PACs) were eliminated from the landscape. Due to this overwhelming loss of late-successional, old forest habitat within the Moonlight Fire area, remaining habitat within and adjacent to the fire footprint is critical to maintain. Remaining old forest habitat needs to be made more fire resilient so that it can persist for both the short-term (next decade) and long-term (into the next century).

All of the high severity and approximately half of the moderate severity acres burned in the Moonlight fire on federal lands were converted into chaparral habitat and displaced species dependent upon old forest habitat, including birds such as California spotted owls and Northern goshawks. This chaparral habitat is not suitable for California spotted owl and Northern goshawks for nesting and will occupy the site for 80-100 years. Individual California spotted owl and Northern goshawks displaced by the Moonlight Fire likely moved into the surrounding landscape. Late-successional, old forest habitat in these PACs adjacent to the Moonlight Fire will be treated to improve fire-resiliency in order to sustain a source population displaced by the Moonlight Fire that could provide a future source of animals to repopulate the fire as old forest habitats recover. These treatment areas would provide long-term refugia habitat for individuals displaced by the fire. The future risk of wildfire creates a strong objective to create and retain refugia habitat for species dependent on old forest habitat. According to fire modeling within





Moonlight PACs proposed for treatment, without treatment, 86% of the spotted owl and goshawk protected activity center acres within the proposed project area are predicted to burn at high severity under moderate fire weather conditions with only 2% of the PAC acres predicted to burn at low severity. The remaining 12% would burn at moderate to moderate-high severity. Roberts et al (2010) found low to moderate severity fires maintain habitat characteristics essential for California spotted owl occupancy and suggested that managed fires that emulate historic fire regimes may maintain habitat and protect the species from the effects of future stand replacing wildfires. The desired condition is to have more than half of the acres within each PAC have fuels loads that would burn at low severity and the majority (75-90 percent of the acreage) would burn at moderate severity or less.

#### **DECISION**

I have decided to conduct habitat restoration treatments (up to 1,123 acres) in locations within a reasonable dispersal distance to the Moonlight Fire footprint. Fuels treatments will occur within and outside of California spotted owl and Northern goshawk PACs. Activities proposed include: chainsaw thinning, piling and pile burning up to 700 acres and underburning a total of 1123 acres. Tree cutting prescriptions will generally have a maximum upper diameter limit of 6 inches at breast height, but would allow up to 8 inches at breast height where necessary for safety and specific tree protection. There are 52 acres of younger stands that currently do not support owl habitat within the treatment boundary. Thinning of trees up to 12 inches at breast height would be allowed in these areas to reduce competition, and therefore increase tree growth of the largest available residual trees. This would allow these younger stands to grow more quickly into habitat conditions suitable for spotted owl and northern goshawk. Additional project activities will include obliteration or barricading of 4.5 miles of non-system roads and trails (2.45 miles planned for obliteration, 2.03 planned for barricading) within and adjacent to project units in order to eliminate unauthorized access to species protected activity centers. An additional 0.23 miles would have sediment reduction measures (waterbars added) to reduce sediment discharge to stream but would remain open for Pacific Gas and Electric company to access their infrastructure (Table 1, Figure 5). My decision is based on a review of the project record that shows thorough consideration of the proposed action using the best available science.

Activities include use of raking around large diameter (30" diameter and greater) trees to reduce loss of legacy trees. Prescribed burning will remove surface fuels and raise crown base height to reduce the fire hazard in the area. Road work will be accomplished through mechanized equipment and hand tool work. No product removal will occur during project activities.

This action is categorically excluded from documentation in an environmental impact statement (EIS) or an environmental assessment (EA). The applicable category of actions is identified in agency procedures as "Timber stand and/or wildlife habitat improvement activities that do not include the use of herbicides or do not require more than 1 mile of low standard road construction" as described in FSH 1909.15, Sec. 32.2(6) and "Activities that restore, rehabilitate, or stabilize lands occupied by roads and trails" as described in FSH 1909.15, Sec 32.3(20). This category of action(s) is applicable because this project improves and protects wildlife habitat without using herbicides. This project also obliterates and barricades unauthorized trails and





roads in order to eliminate vehicle access into the protected activity centers to halt illegal woodcutting and reduces sediment discharge to streams.

I find that there are no extraordinary circumstances that would warrant further analysis and documentation in an EA or EIS. I took into account resource conditions identified in agency procedures that should be considered in determining whether extraordinary circumstances might exist:

- Federally listed threatened or endangered species or designated critical habitat, species proposed for Federal listing or proposed critical habitat, or Forest Service sensitive species – There are no known threatened or endangered wildlife species within the project area. There is no designated Sierra Nevada yellow-legged frog critical habitat and therefore there will be no effect to designated critical habitat. There are no Sierra Nevada yellow-legged frog detections or occupied habitat within the project area. However, there is suitable habitat that may be affected by this project. Therefore, this project may affect is likely to adversely affect the Sierra Nevada yellow-legged frog. Surveys have been conducted in 2015-2016 and no Sierra Nevada yellow-legged frogs were detected within the project area. Mitigations to minimize effects to suitable habitat are described in table 2 (Dillingham, Wildlife BE/BA, MIS, and Migratory Bird Input). There are no known threatened or endangered plant species in the project area. There are R5 Forest Service sensitive and special interest plant species occurrences within the Moonlight PAC treatment units. The project includes project design features to protect Region 5 Forest Service sensitive, special interest, and/or rare plant species. The proposed activities may affect individuals, but is not likely to result in a trend toward Federal listing or loss of viability for Follett's monardella (Monardella follettii) or Webber's Milkvetch (Astragalus webberi). There will be no significant impacts to these species due to the limited scale and intensity of the project and because project design features (identified earlier) will avoid significant adverse impacts to plants or serpentine soil type (Belsher-Howe, Botany BE, Specialist Interest, and Invasive Plants Input).
- Flood plains, wetlands, or municipal watersheds Flood plains and small wetland features do exist within the project area; the above recommended measures would minimize impacts to hydrologic function, water quality, sediment regimes, and riparian habitat. No municipal watersheds exist within the project area (Gardiner, Hydrology and Soils Input).
- Congressionally designated areas such as wilderness, wilderness study areas, or national recreation areas The project is not within or adjacent to any congressionally designated areas. Therefore, there will be no effect upon such areas.
- Inventoried roadless areas or potential wilderness areas The project is not within or adjacent to any inventoried roadless areas. Therefore, there will be no effect upon such areas.
- Research natural areas The project is not within any research natural areas. Therefore, there will be no effect upon such areas.
- American Indians and Alaska Native religious or cultural sites Consultation was





initiated with the following Tribes: the Concow Maidu Tribe of Mooretown Rancheria, the Susanville Indian Rancheria, the Tyme Maidu Tribe of Berry Creek Rancheria, the Greenville Indian Rancheria, the Estom Yumeka Maidu Tribe of Enterprise Rancheria, the Mechoopda Indian Tribe of Chico, and the Maidu Summit Consortium. At this time, there are no known religious sites or cultural sites in the project area. Therefore, there will be no effect upon such areas. To the extent that archeological/historic sites or areas are identified during project analysis or implementation, project design features discussed above will ensure that heritage resources are protected and significant effects are avoided (Weinberg, Heritage Resources Input).

• Archaeological sites, or historic properties or areas — Archeological sites do exist within the project area and have been inventoried, documented, and flagged for avoidance. Wooden features will be excluded from treatment through wet or hand lines after discussion with district archeologist. To the extent that additional archeological/historic sites or areas are identified during project analysis or implementation, project design features discussed above will ensure that heritage resources are protected and significant effects are avoided (Weinberg, Heritage Resources Input).

#### PUBLIC INVOLVEMENT

This action was originally listed as a proposal on the Plumas National Forest Schedule of Proposed Actions and updated periodically during the analysis.

A scoping letter and project proposed action document was sent to interested and affected parties, including Tribes, federal, state, and local agencies, adjacent land owners, special use permit holders and miners on April 11, 2016.

Comments were accepted for 30 calendar days following public scoping mailing. All comments were addressed using best available science. Some comments were positive, commending Forest Service action to address fuel reduction in previously untreated areas.

#### FINDINGS REQUIRED BY OTHER LAWS AND REGULATIONS

This action is in accordance with NEPA Implementation Regulations, 40 CFR 1501.2 and with the goals, objectives, and management direction of the Plumas National Forest Land and Resource Management Plan as amended by the 2004 Sierra Nevada Forest Plan Amendment Record of Decision.

This project will be conducted in accordance with requirements of the California Central Valley Regional Water Quality Control Board to ensure compliance with California Water Code and the Federal Clean Water Act.

This project meets the requirements of the National Historic Preservation Act of 1966, as amended, and implementing procedures outlined in the Region 5 Programmatic Agreement (see project design features for this project).





The Moonlight PAC project may affect and is likely to adversely affect the Sierra Nevada yellow-legged frog and would have no effect to designated Critical habitat. However, conservation measures have been developed to minimize effects to habitat. Surveys have been completed and no Sierra Nevada Yellow-legged frogs are known to occur in any treatment units, therefore, effects are expected to be negligible to this species. Best Management Practices shall be implemented during all thinning, burning and road decommissioning actions which will reduce the potential for sediment to reach suitable habitat.

The project does not affect any other threatened, endangered or candidate species and thereby complies with the Endangered Species Act of 1973.

# ADMINISTRATIVE REVIEW (APPEAL) OPPORTUNITIES

This decision is not subject to appeal or objection by individuals or organizations.

#### IMPLEMENTATION DATE

Implementation is planned to begin in October 2017. Implementation would begin with chainsaw thinning, piling, and legacy tree protection activities to prepare for prescribed burning. Prescribed burning is planned to begin in fall and winter 2018 and continue until project completion.

#### CONTACT

Colin Dillingham, Project Leader, can be contacted at the Mt. Hough Ranger District, 39696 Highway 70, Quincy, CA 95971; 530 283-7687; <a href="mailto:cdillingham@fs.fed.us">cdillingham@fs.fed.us</a>.

Micki D Smith

Date

District Ranger, Mt Hough Ranger District





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#### APPENDIX A - PROPOSED ACTIONS

Five sites have been identified for treatment in the Taylorsville and Indian Valley area overlapping California spotted owl and/or Northern goshawk protected activity centers. Information below includes the PAC names, PAC numbers, and acres planned for treatment. In areas where a road does not form the boundary of the treatment unit, fire line would be constructed along the perimeter of the proposed treatment areas. Treatments would include chainsaw thinning ( $\leq$  6" dbh trees,  $\leq$  8" where needed for safety and specific tree protection), piling, and pile burning, and a follow up prescribed burn (underburn). Perimeter treatments could include chainsaw thinning and piling approximately 200 feet in from holding lines to improve ability of firing operations. Hazardous snags adjacent to holding lines would be felled when necessary for worker safety. Trees great than 30" diameter at breast height (dbh) would have duff and wood removed within 4 feet radius to reduce mortality during prescribed burning activities. Specific fuel reduction objectives are: 1) Maintain over 80% of the original stand trees over 10" dbh, 2) Maintain 4 to 8 of the largest snags per acre where present, and 3) Maintain 3 to 6 large diameter downed logs per acre where present (greater than 20 inches dbh).

- 1. Hunt Canyon (Unit 1) is approximately 220 acres and overlaps with California spotted owl PAC PLU0084. NFS road 28N32 would form the north and east holding line with ridges forming the south and west lines during firing operations. The bottom of the unit is accessed through private property from Plumas county road 112. Existing fuels treatments exist above the unit to the northeast.
- 2. Foreman Ravine (Unit 2) contains approximately 360 acres within and outside of the California spotted owl PAC PLU0130 and the Foreman Ravine goshawk PAC. NFS trail 10M37 (also known as NFS road 26N02) forms the north holding line, and trail 11M26 (also known as NFS road 26N42) forms the south holding line. The east line follows an





- old road bed and a ridgetop to form containment lines. The western line follows a ridgeline down to the 10M37 trail. Adjacent fuels treatments have been implemented to the north and east.
- 3. Iron Dyke (Unit 3) is approximately 379 acres and overlaps with California spotted owl PAC PLU0129 and the Hough Creek goshawk PAC. Plumas County road 208, also known as China Grade, will form the western holding line, and a non-system trail will form the southern holding line. A control line will be constructed from the end of this non-system trail and follow a ridge down to the stream, then west up another ridge to reconnect with PC 208. The control line will follow private property for approximately 125 meters. These control lines not occurring on road beds will utilize a chainsaw thin and pile buffer approximately 60 meters wide to encourage low fire intensity and reduce the risk of fire leaving containment lines.
- 4. Webber's Milkvetch Enhancement (Unit 4) is approximately 26 acres and overlaps with California spotted owl PAC PLU0129. Monitoring of other Webber's milkvetch underburns will occur prior to burning at this site. If underburning is found to be detrimental at other sites, it would not be implemented in this unit. This unit will use PC 208 as the northwest holding line. The other holding lines will be constructed utilizing sub-ridges and other topographical features on the southwest and north and a road bed on the southeast. The unit will border private property and a chainsaw thin and pile buffer unit will be implemented to reduce the risk of fire leaving containment lines and getting onto private lands.
- 5. Montgomery Creek (Unit 5) is approximately 137 acres and overlaps with California spotted owl PAC PLU0170. NFS roads 25N29F and 25N29 will form the majority of the holding lines with a ridge being used between these features to maintain control during firing operations.

# Non-system Road Removal

Approximately 4.5 miles of non-system roads and trails would be barricaded (2.45 miles), or obliterated (2.04 miles) to eliminate vehicle access into the PACs to halt illegal woodcutting, reduce sediment discharge to streams, and reduce impacts to archeological sites and forested lands affected by these unauthorized but open roads and trails (Table 1, Figure 1). An additional 0.23 miles would have sediment reduction measures (waterbars added) to reduce sediment discharge to stream but would remain open for Pacific Gas and Electric company to access their infrastructure (Table 1, Figure 1).

Table 1. Justifications and input from Wildlife, Hydrology and Archeology concerning non-system roads associated with Moonlight PAC Fuels Reduction Project.

Road Number	Comments	Length (miles)	Archeology Input	Proposed Action
1	Impacts to hydro	1.37	No obliterate, OK to barricade	barricade
2	Impacts to hydro	0.41	No obliterate, OK to barricade	barricade
3	Impacts to hydro	0.23	No obliterate, OK to barricade	barricade
4	Impacts to hydro	0.07	No obliterate, OK to barricade	barricade
5	Impacts to hydro	0.21	No obliterate, OK to barricade	barricade
6	Impacts to hydro	0.13	No obliterate, OK to barricade	obliterate
8	Impacts to wildlife and hydro	0.13	OK to obliterate	obliterate





9	Impacts to wildlife and hydro	0.36	OK to obliterate	obliterate
10	Impacts to wildlife and hydro	0.35	OK to obliterate	obliterate
11	Impacts to wildlife and hydro	0.09	OK to obliterate	barricade
12	Impacts to wildlife and hydro	0.23	OK to obliterate	obliterate
13	PG&E needs access	0.23	OK to obliterate	waterbar
14	Impacts to wildlife and hydro	0.09	OK to obliterate	obliterate
15	Impacts to wildlife and hydro	0.10	OK to obliterate	obliterate
16	Impacts to wildlife and hydro	0.58	OK to obliterate	obliterate
17	Impacts to wildlife and hydro	0.10	OK to obliterate	obliterate

#### APPENDIX B - MITIGATIONS

### **Botany**

Monardella follettii was found in the Foreman Ravine and Iron Dyke units. The Foreman Ravine population is in the interior of the unit and is unlikely to be impacted by proposed project activities. If hand thinning and piling activities are found to be necessary near this population, piles shall be constructed at least 25 ft. from individual plants within the population. Fireline construction and active lighting of fuels shall not occur within the population boundaries without consulting the district botanist. In the Iron Dyke unit, the Monardella follettii populations are on the southeast edge near the 5,221 peak shown on topographic maps. These populations may be easiest to avoid altogether rather than mitigate potential effects. If hand thinning and piling activities are found to be necessary near these populations, piles shall be constructed at least 25 ft. from individual plants within the population. Fireline construction and active lighting of fuels shall not occur within the population boundaries without consulting the district botanist.

Underburning in the proposed Webber's milkvetch unit is planned, but will be implemented based on results from other areas of planned implementation covered under previous NEPA documents. Piling and burning at least 25 feet from existing plants will minimize potential harm from excessive heat and burning activities. If underburning is found to be detrimental to individuals and populations it would not be implemented in this unit.

Do not stage crews or materials in known locations of rare plant or invasive species in order to prevent impacts to rare plants and spreading weeds. If vehicles or equipment enters invasive plant infestations, they will be cleaned prior to leaving the infested area.

#### Recreation

A recreation event, the Grinduro bike race, is scheduled for the first full weekend in October. Riders will use China Grade to ride from Taylorsville to the Fairgrounds in Quincy. Project activities should not utilize the China Grade road during the first full weekend in October.

Rehabilitate any fire lines after burning is completed to reduce the likelihood of user created trails from becoming established.





#### Wildlife

California spotted owl and Northern goshawk nesting sites within project area have been identified and current nest sites will be subject to LOPs (Limited Operating Period, see figure below for locations and dates).

The project includes the following design features to avoid the potential for significant environmental effects or extraordinary circumstances:

- Protection for Threatened, Endangered, and Region 5 Forest Service sensitive (TES) species will be provided by prohibiting the chainsaw cutting during the times of year when such activities could disturb TES species. The 2004 Sierra Nevada Forest Plan Amendment Record of Decision (page 61) allows for early season prescribed fire in spotted owl and goshawk PACs during the LOP, and this includes limited use of chainsaws as required during prescribed burning operations. Limited Operating Periods (LOPs) on chainsaw activities associated with thinning are as follows:
  - O California spotted owl: No chainsaw operations within ¼ mile of spotted owl active nests between March 1 and August 31.
  - Northern goshawk: No chainsaw operations within ¼ mile of goshawk activity centers between February 15 and September 15 or until biologist confirms nonnesting or young have left area.
- <u>Sierra Nevada Yellow-legged frog:</u> Follow all project design features listed in Biological Evaluation. No burning or thinning work within 82 feet of intermittent or perennial streams above 4500 feet elevation from October 1 through April 15 unless survey work completed during summer months prior to implementation shows no Sierra Nevada Yellow-legged frogs present.





Table 2. Project design feature to prevent impacts to Sierra Nevada and Foothill Yellow-legged frogs and their habitat.

Criterion	Actions
Sediment Production	Adhere to all Best Management Practices and Standard Operating Procedures to prevent sediment from reaching streams as a result of all project activities.
Prescribed Burning	Avoid lighting underburn within suitable SNYLF habitat. Backing fires is acceptable. No prescribed fire ignited within 82 feet of streams over 4,500 feet elevation. Below 4,500 feet, no ignition within 25 feet of streams.
Mechanical Equipment	No heavy equipment allowed within 100 feet of perennial streams or 82 feet from intermittent streams that have suitable habitat for frogs (includes road decommission equipment, skid steer) unless surveys conducted immediately prior to equipment use confirms that SNYLF are not present.
Chainsaw Thinning	Chainsaw thinning allowed within the inner RCA, but no piling of material within 82 feet of perennial streams over 4500 feet elevation (to prevent risk of burning frogs that choose to hibernate in piles). No piling within 25 feet of perennial or intermittent streams at all elevations. Chainsaw thinning within 82 feet of streams and over 4500 feet elevation would be restricted to summer season when frogs are in streams, and not in uplands.
Drafting sites	New or existing water draft sites would be evaluated with the Mt. Hough Ranger District Biologist prior to changes or use. Drafting sites shall be visually surveyed for amphibians and their eggs before drafting begins. Forest personnel and contractors shall use the Forest Service approved suction strainer (FSM 5161) or other foot vales with screens having openings less than 2mm in size at the end of drafting hoses. The suction strainer shall be inserted close to the substrate in the deepest water available; the suction strainer shall be placed on a shovel, over plastic sheeting, or in a canvas bucket to avoid uptake of substrate or aquatic biota.
Pile Burning	Avoid constructing burn piles in or immediately adjacent to stream channels: minimum distance shall be 15 feet from ephemeral streams, 25 feet from intermittent and perennial streams below 4,500 feet elevation, and 82 feet from intermittent and perennial streams above 4,500 feet elevation.

# Heritage

Cut trees will be directionally felled away from recorded and flagged sites. No piling will occur within flagged sites and all wooden features will be protected with wet and/or hand line to prevent fire from destroying feature. In the event that new heritage resources are observed during project implementation, operations will cease immediately and District Archaeologist(s) will determine the appropriate course of action.

#### Watershed

NFS road conditions should be evaluated prior to implementation; when feasible, avoid accessing burn units when excessive rutting may occur. Follow-up road maintenance may be necessary if road surfaces are negatively impacted by project related vehicle access. Fire line should be rehabilitated after burning is complete. Water bar spacing shall be 50 feet on slopes over 30 percent, 100 feet for lesser slopes. Scatter available woody material and duff on disturbed soil to improve soil cover. Where feasible, locate burn piles at least 15 feet away from stream channels and culvert inlets, both of which are known to exist within the project area. Hand thin and pile or lop and scatter conifers immediately adjacent to spring habitats so as to reduce the potential for high burn severities.





Rehabilitate all fire line as soon as possible after implementation to reduce erosion potential and unauthorized OHV traffic along these linear features.

A minimum of 50% effective ground cover should be maintained across each unit within the project area after implementation due to a moderate soil erosion hazard rating in the project area.

# **Forest Vegetation**

Burning during the dormant season is recommended. This is usually late fall when the average temperature is around 40°F to mid-spring, prior to bud break.





# APPENDIX C - FIGURES

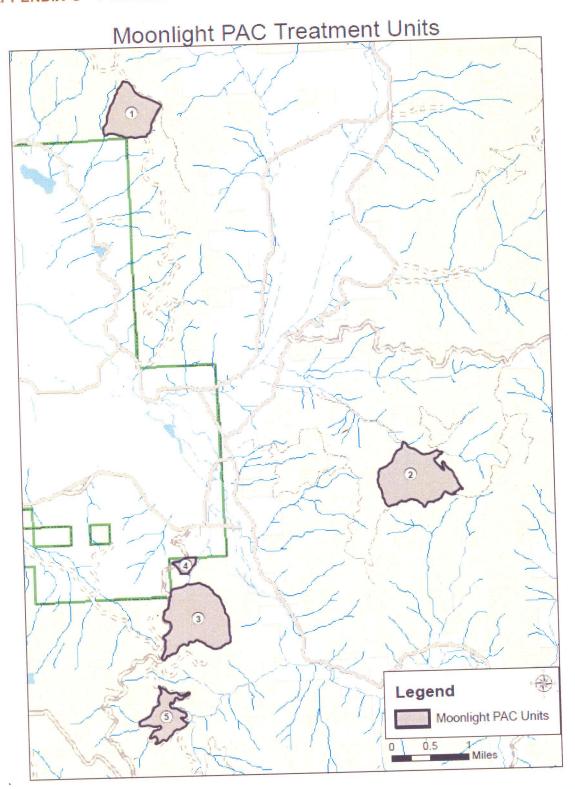


Figure 1. Moonlight Fire PAC underburn treatment map





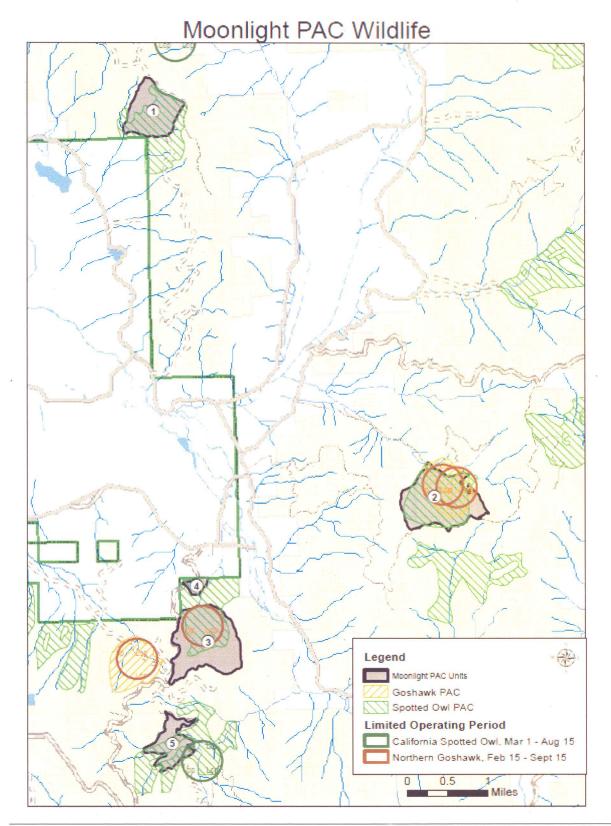


Figure 2. Treatment units shown with spotted owl and goshawk PACs and limited operating periods.





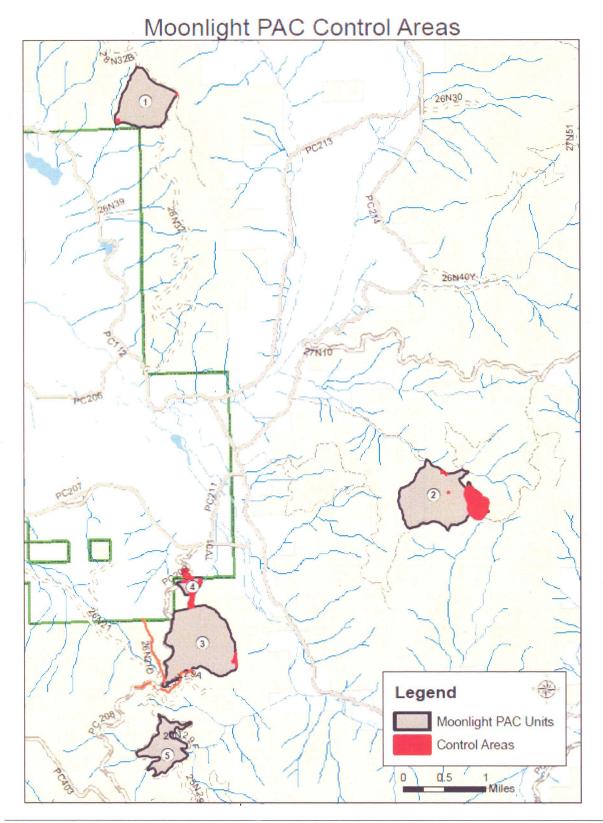


Figure 3. Control areas associated with Moonlight PAC treatments.





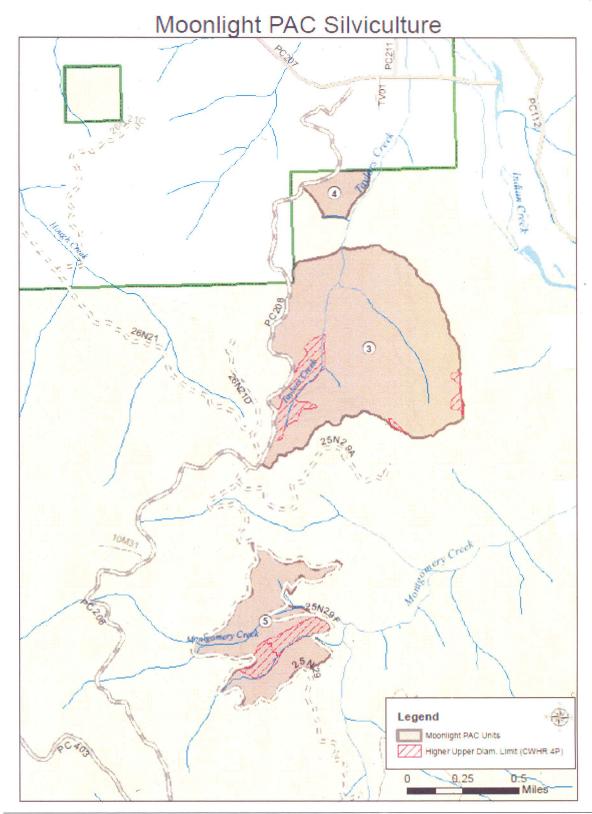


Figure 4. Silviculture treatment areas within Moonlight PAC treatment units.



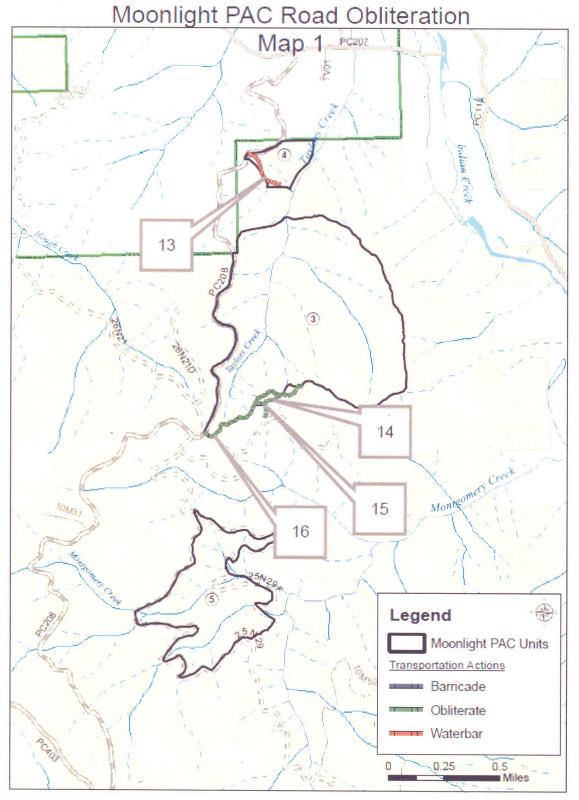


Figure 5. Non-system roads planned for treatment associated with units 3 and 4 of the Moonlight PAC treatment project.





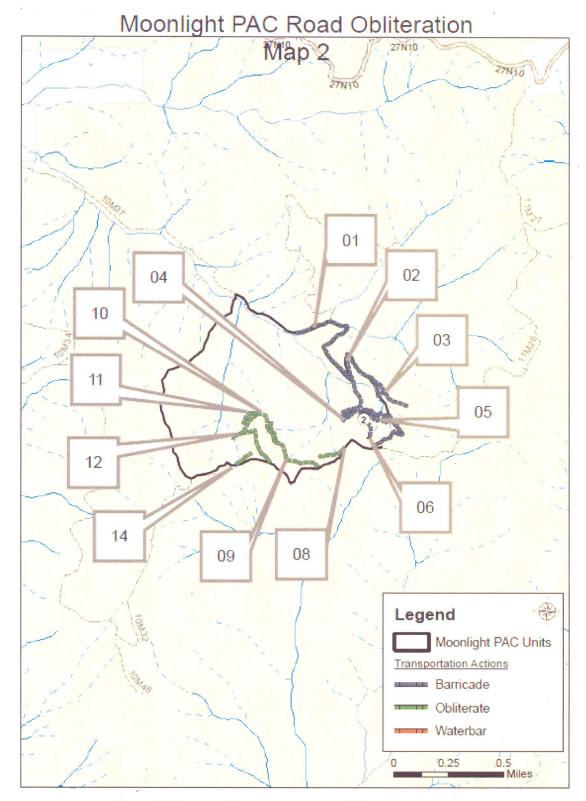


Figure 6. Non-system roads planned for treatment associated with Foreman Ravine, unit 2, of the Moonlight PAC treatment project.